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FOREWORD

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Karen Freund 12/1/97

PI - Signature Date

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5.0 INTRODUCTION

5.1 Specific Aims

The primary question of focus for this study is:

1. How does physician gender influence the diagnosis and treatment of breast cancer in women?

Secondary questions to be explored in the analysis are:

2. What are the independent and joint influences of physicians' race, geographic location, practice specialty and age on (a) diagnosis, (b) treatment recommendations, and (c) referral patterns?

3. What are the independent and joint influences of patient age, race, socioeconomic status, comorbidity, and frailty on (a) diagnosis, (b) treatment recommendations, and (c) referral patterns for suspected and diagnosed breast cancer?

4. Can any variations in diagnosis and treatment patterns be explained by the interaction of patient and physician characteristics?

5.2 Fractional Factorial Experiment

We have developed a unique experimental design, where clinical "patients" are developed for videotape and enacted by actors to simulate patient-physician encounter. Versions of each videotape are produced that maintain the same clinical information while varying those patient features as part of the experimental design. In each of two medical scenarios, we shall investigate five patient factors: age, race, socioeconomic status, comorbidity and mobility. The patients enacted on videotape are either 65 or 80 years of age, and either black or white. Socioeconomic status is either upper-level or lower-level, as expressed by a complex of characteristics, including dress, idioms of speech, and coverage by Medex versus Medicaid health insurance. Comorbidity is dichotomized as a patient free of chronic illness, or one with stable hypertension and diabetes on oral medication. Mobility is defined as either no disabling condition, or frailty as a woman with osteoarthritis of the knees requiring the use of a walker.

Each of the 16 "characters" enacts two scenarios. In the first scenario, the patient presents with a question of a new breast mass, seeking diagnostic evaluation. In the second scenario, the patient presents with a confirmed .8 cm carcinoma by excisional biopsy and seeks recommendations for completion of diagnostic evaluation, primary and adjuvant therapies.

5.3 Physician Characteristics and Study Population Selection

We used matched pairs of male and female physicians to study our primary variable of interest, matching to control for geographic location, race, age and specialty.

In our previous report we have detailed the methods of our recruitment strategy and exclusion criteria.

6.0 BODY

The work performed for year 3, months 25-36, will discuss:

6.1) Instrument, 6.2) Sampling and Recruitment Strategies, 6.3) Dataset Development, 6.4) Consultants, 6.5) Training of Field Interviewers, 6.5.1) Interview Staff, 6.5.2) Training, 6.5.3) Site Visits, 6.6) Interviews, 6.7) Data Management, 6.7.1) Quality Assurance, 6.7.2) Programming, 6.8) Data Analysis/Results, 6.8.1) Initial Analyses, 6.8.2) Future Analyses,6.9) Presentation of Results, 6.10) Planned Activities for Project Year 04, 6.10.1) Field Interviews, 6.10.2) Analyses, 6.10.3) Presentations, 6.11) Other Activities

6. 1 Instrument (Task 1)

There have been no additional changes to the instruments or instructions to interviewers since our last annual report.

6.2 Sampling and Recruitment Strategies (Task 2/5/7/9)

With the primary aim of this study investigating how physician gender influences care for breast cancer patients. As stated in our last report we have had a difficult time locating sufficient numbers of women to recruit into the study. We have succeeded in first recruiting as many women as possible into the study and then match men to these women. We have been successful in obtaining all but 2 women.

The secondary aim in this study is to investigate the joint and independent effects of physician race and subspecialty. As information about physician race is not obtainable by any commercial listing of physicians our consultants have developed lists of black physicians in their communities, which are being used to recruit black physicians. We made it our first priority to enroll women and were able to recruit 13 African Americans. This resulted in a smaller number of African-American being recruited into the study.

Since our last report it we have expanded the geographic locations of where the physicians were recruited from in order to increase the number of eligible females from which to recruit into the study. Texas for the Atlanta/South and Chicago to be included with Detroit. Given that each of the

three locations were chosen for their rate of breast conserving surgery, it was necessary to pick alternative sites with similar rates of breast conserving surgery. By referring back to the study by Nattinger (1992) we were able to see that North Carolina, South Carolina, Tennessee, Alabama, Louisiana and Texas all have rates similar to Atlanta and Chicago similar to Detroit.

We also continued to employ a "snowball" technique of recruitment from our subjects' circles of colleagues. At the end of the interview, subjects were asked for the names of other physicians in the area, specifically surgeons who have performed breast biopsies and mastectomies in the last five years, or medical oncologists who have provided breast cancer care in the last five years. This techniques initially identified a few women not listed on any other source, but has quickly verified the exhaustive nature of our searches by identifying only previously known female physicians in these specialties.

An unforeseen obstacle was that after recruiting all women into these slots, we found that we were looking at a group of women in a somewhat narrow age bracket. We then began to have difficulty recruiting men into the study that matched the ages of the women in the study. We have addressed this by widening the matching protocol from 5 to 10 year differences in year of medical school graduation.

6.3 Dataset Development

A completed SAS dataset has been created of the 90% of the sample. All of the variable frequencies and ranges were analyzed to look for coding errors. Outcome variables were created.

6.4 Consultants

During year 3 of this project, we have continued to use the same three consultants, one from each of the geographic locations to assist with the project. Laura Essermann, MD from California, Bruce McCarthy MD, MPH from Detroit, and Christopher Lockhart, MD, from Atlanta.

All consultants have continued to perform the following tasks:

1) Information on local practice patterns -- The consultants have continued to provide valuable information on certain practice patterns in their communities. For example, in California the estrogen/progesterone receptor test is presented in a different format in California, than it is presented in this study. Also, they have provided information surrounding the recent FDA approval and local marketing practices and use of the high definition ultrasound test. Also we have learned that there is a law in California that requires all physicians to offer reconstruction to all women.

2) Contacting refusers -- The Consultants have contacted refusers and personally asked them to participate in the study.

6.5 Training of Field Interviewers (Task 3)

6.5.1 Interviewers

There has been only one change and no additions to out interviewing staff since our last annual report. The interviewers are Lisa Meyer, B.A. and Eric Riles, B.A. from Atlanta, and Sarah Bates, M.A., Susan Sheffield, M.A. from San Francisco and Sabrina Black from Detroit, Deborah Dahn an interviewer in Detroit is no longer working on the project.

6.5.2 Training

As stated in previous report each interviewer was trained in a three day training sessions in Boston prior to the start of interviewing. The Field Project Supervisor, Dennis Cohen and Project Manager, Michelle Mancuso did continued training with each interviewer through conference calls on an as needed basis

6.5.3 Site Visits

During year 3 there were two additional site visits performed. The first site visit was conducted in Atlanta, where two interviewers were observed. The second was completed in California where two interviewers were personally observed. During each site visit all interviewers were personally observed during two interviews with physicians, provided with feedback and given the opportunity to clarify any questions about the instrument. A site visit was not completed in Detroit, with limited scheduling flexibility of Sabrina Black; she was only completing a limited number of interviews. Susan Sheffield, a California interviewer, who had previously been observed in California site visit, completed the remainder of interviews in Detroit.

6.6 Interviews (Tasks 6/8/10)

Following are the numbers of completed and scheduled interviews for the end of September 1997, by gender, race and subspecialty for all three locations separately and together. See Appendix 1 for a breakdown of individual interviews by states.

Our projected goal for July of 1997 was the completion of 64 interviews at each site. By July of 1997, we had completed 90% of our entire sample. To date we have completed 60 interviews in California, 60 interviews in Detroit, and 59 interviews in Georgia, for a total of 179 physicians. Five additional physicians are pending reschedule, for a total of 184 physicians.

Approximately one third of physicians recruited are in medical oncology and two thirds

in surgery. This breakdown will provide approximately 65 medical oncologists and 114 surgeons, and sufficient power to perform analyses by physicians specialty type, with the ability to detect at least a 18-24% difference between physician specialty with >80% power.

Unfortunately the total number of African American physicians recruited is small, and will result in lower power for analyses by physician race. We believe that our multiple recruitment methodologies have identified all eligible African American physicians in areas of recruitment. If 10% of the sample is African American, we will be able to detect a 22-36% difference by physicians' race with 80% power.

Totals for Site 1 -- San Francisco, California
October 1997

	Pending Reschedule	Interviewed	Total
Gender			
Males	1	30	31
Females	1	30	31
Total	**2**	**60**	**62**
Race			
African American	1	1	2
Caucasian	1	59	60
Total	**2**	**60**	**62**
Specialty			
Medical Oncology	1	14	15
General Surgery	1	46	47
Total	**2**	**60**	**62**

Totals for Site 2 -- Detroit, Michigan

	Pending Reschedule	Interviewed	Total
Gender			
Males	1	29	30
Females	1	31	32
Total	**2**	**60**	**62**
Race			
African American	0	0	0
Caucasian	2	60	62
Total	**2**	**60**	**62**
Specialty			
Medical Oncology	1	26	27
General Surgery	1	34	35
Total	**2**	**60**	**62**

Totals for Site 3 -- Atlanta, Georgia

	Pending Reschedule	Interviewed	Total
Gender			
Males	1	28	29
Females	0	31	31
Total	**1**	**59**	**60**
Race			
African American	0	11	11
Caucasian	1	48	49
Total	**1**	**59**	**60**
Specialty			
Medical Oncology	0	25	25
General Surgery	1	34	35
Total	**1**	**59**	**60**

Totals for all Locations

	Pending Reschedule	Interviewed	Total
Gender			
Males	3	87	**90**
Females	2	92	**94**
Total	**5**	**179**	**184**
Race			
African American	1	12	13
Caucasian	4	167	171
Total	**5**	**179**	**184**
Specialty			
Medical Oncology	2	65	67
General Surgery	3	114	117
Total	**5**	**179**	**184**

6.7 Data Management

6.7.1 Quality Assurance

All instruments and data forms have continued to be checked on an ongoing basis for completion, accuracy and legibility of the interviews and instrument was performed. A quality review of audiotapes on every interview has been completed. The Field Supervisor, Dennis Cohen, does the logistical editing of all audiotapes and the Project Manager, Michelle Mancuso, reviews the tapes for medical/scientific accuracy. To date 98% of the interviews that have been reviewed are acceptable for inclusion in the study.

A problem-coding log, in which all "other" category responses and specific circumstances are recorded has been complied and has been maintained. All feedback from the Project Manager is given to Field Supervisor who then reports all feedback to each individual interviewer. In addition, weekly memos of problems and concerns of interviewers are being composed and sent out to all interviewers. The Principal Investigator monitors this process on a regular basis.

6.7.2 Programming

Programming of all three instruments has been completed. Variables have been developed based upon the major independent and dependent variables defined in our previous study. These are as follows:

6.8 Data Analysis/Results

6.8.1 Initial Analyses

We have begun initial analyses with the over 90% of the data. The two aspects of the initial analyses that we focused on are:

1) Case 1 - Breast Cancer Prevention Trial Questions

2) Case 2 – Patient characteristics and physician gender differences in breast cancer management

1) Case 2 – Patient Characteristics and Gender Differences in Breast Cancer Management

Our initial analyses included looking at bivariate and matched analyses for the following outcomes:

1) Use of axillary node dissection
2) Use of testing to investigate for metastatic spread
3) Use of breast conserving surgery
4) Use of full primary therapy
5) Use of chemotherapy
6) Use of Tamoxifen
7) Use of Reconstructive surgery following mastectomy

Bivariate Analyses

For each of these 7 variables a bivariate association of the 5 patient characteristics (age, race, socio-economic status, physical mobility, and was performed. Appendix 2 indicates the results of this analysis.

We found that the 65 year old patient was significantly more likely to receive an axillary node dissection than the 80 year old patient with an odds ratio of 6.3, $p<.01$. They are offered full primary therapy more often than 80 year olds with an odds ration of 3.9, $p<.01$. They are more likely to be given Chemotherapy than the 80 year olds, with an odds ratio of 11.9, $p<.01$. They are more likely to be given Tamoxifen than 80 year olds, with an odds ratio of .60, $p<.10$. They are also more likely to be offered Reconstruction following a mastectomy with an odds ratio of 5.4, $p<.01$.

Caucasians were more likely to receive axillary node dissection than African-Americans, with an odds ratio of 0.4, $p<.05$.

Agile patients were more likely to be offered reconstructive surgery following mastectomy than their frail counterparts, with an odds ratio of 2.2, $p<.10$

Healthy patients were more likely to be offered reconstrucitve surgery following mastectomy than patients with comorbidities, with an odds ratio of 1.9, $p<.05$.

Stratified Analyses

A stratified analyses of physician gender (male/females) with each of the outcome variables was also performed. There was a significant finding that Male physicians were more likely to offer tamoxifen to women than females were ($p<.01$). This was the only significant finding of the outcomes. All other outcomes there were not significant differences in males and female physicians. (See Appendix 3)

Interactions were performed on all of the variables. Significant findings included:

Interaction between physicians gender (male/female) and comorbidity in offering breast reconstruction (p=.05). (See Appendix 4). Women physicians offered breast reconstruction at higher rates than male physicians in healthy patients.

Female physicians recommended chemotherapy more often for 80 year old women than male physicians. (See Appendix 5).

A borderline interaction was also seen in breast conserving surgery comparing physician gender with patient socio-economic status. (See Appendix 6).

Paired Analyses

A paired analysis, which consisted of 50 matched pairs, was also performed. This analysis showed a similarity to the unmatched bivariate analyses. The fact the unmatched data is an almost balanced sample is the probable reason for the lack of difference between the matched and unmatched analyses.

2) Breast Cancer Prevention Trial Analyses

When reviewing the data collected from the specialists, the first question we analyzed was whether the physician reported that they would recommend to the patient the Breast Cancer Prevention Trial. Overall, 21% of physicians would recommend the trial. Looking at the patient and physicians characteristics which influenced the physician recommendation, Age was the only patient characteristics associated with recommending the trial, with 28% of physicians recommending the trial if the patient was 65 years of age, and 12% if the patient was 80 years of age. Please note that the study did not have an age cutoff for enrollment, but required that the patient's life expectancy to be at least 10 years. (Appendix 7)

Patient race, socioeconomic status, and physical mobility had no effect. Also the presence of comorbidity did not have an effect, even though its presence would reduce life expectancy. In trying to understand why physicians made these recommendations, we asked providers how important they thought prevention of the 3 study outcome conditions, namely breast cancer, osteoporosis and coronary artery disease, would be for the patient they saw in the videotape. The consistent finding was that, although the incidence and prevalence of all three conditions increases with age, prevention was seen as an important issue for the 65 year old woman, and no longer for the 80 year old woman, whether or not she had comorbidities that would reduce her life expectancy to less than 10 years. The appearance of frailty also decreased the perception that prevention was important. Of interest, in the case of the women with diabetes and hypertension, prevention of coronary artery disease was not seen as having increased importance over women without these comorbidities. (Appendix 8).

6.8.2 Future Analyses

Case I - Presentation of Possible Breast Mass

The two major outcome variables of interest will be the 1) probability estimate of breast cancer and 2) recommendation of some form of tissue analysis, including fine needle aspiration biopsy, core biopsy or open biopsy. Initial analysis will be paired-tests to identify if physician gender, matched for all other variables including geographic area, race, specialty and years in training are associated with physicians' estimates of likelihood of breast cancer and decision to obtain tissue analysis. Second, multiple regression and logistic regression models will be developed to predict the probability estimate of breast cancer and recommendation for tissue analysis. Variables included in each model will be the five patient characteristics (age, race, specialty, socio-economic status, mobility and comorbidities) and four physician characteristics (gender, race, subspecialty, and years of practice). Initially no interaction will be included. We shall use the CATMOD implementation of MLLR (SAS, 1988) because it permits us to analyze the responses of the male and female members of each pair as a joint outcome and to build models using the factorial structure of the independent variables in a convenient, flexible programming language.

For Case 2, the additional dependent variables of interest for analysis are:

1) Geographic variation
2) Specialty variation
3) Physician race
4) The effect of the scale variables (discomfort with uncertainty, fear of malpractice, etc...) on the outcomes.

6.9 Presentation of results

We presented our initial data analysis at Two professional meetings to date:

1) American Association for Cancer Education, October 1997, Atlanta, Georgia. Oral presentation, entitled, Physician Attitudes towards Cancer Prevention Trials. (Appendix 9).

2) Department of Defense Breast Cancer Research meeting, November 1997. Poster presentation, entitled, Breast Cancer Care: Does Physician Gender Matter?

6.10 Planned Activities for Project Year 04

6.10.1 Field Interviews

Over 90% of data have been collected. There are 5 interviews that need to be rescheduled and 12 physicians that have not yet been recruited. Our goal is to finish up interviewing by December 1997. At this point we will discontinue searching for additional subjects and end the data collection phase. We have sufficient power to analyze results with the numbers of physicians that we have recruited.

6.10.2 Analyses

We will perform additional analyses and prepare manuscripts to submit to peer-reviewed journals

6.10.3 Presentations

We will submit abstracts to professional meetings in order to present results. Meetings of interest will include Society of General Internal Medicine, American Public Health Association.

6.11 Other Activities

Institutional Review Board -- Approval has been renewed from the Boston University Medical Center Hospital IRB (Appendix 10).

7.0 Conclusion

We have made substantial progress in the past year. We have recruited all but 2 females into the study. Although we did not meet our goals of completing all interviews, we have been successful in obtaining almost all females into the study. We are near completion for all interviews in all locations. We have developed a data management system, coded and data entered all interviews and completed initial data analysis on 90% of the sample. A presentation was made at the Department of Defense Breast Cancer Research Meeting in November and the American Association for Cancer Education in October. We have outlined our activities for year 4.

Our goals for year 4 include:

1) Completion of interviews for all physicians.
2) Data analysis
3) Manuscript preparation
4) Presentation of results

8.0 REFERENCES

Nattinger AB, Gottlieb MS, Veum J, Yagnke DL, Goodwin JS. Geographic variation in the use of breast conserving treatment for breast cancer. N Engl J Med. 1992;326:1102-7.

Nattinger AB, Gottlieb MS, Hoffman RG, Walker AP, Goodwin JS. Minimal increase in use of breast-conserving surgery from 1986-1990. Medical Care. 1996;34(5):479-489.

9.0 APPENDICES

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2. Bivariate Analyses of Patient Characteristics and Physician Treatment Preferences
3. Gender Differences in Breast Cancer Treatment
4. Interaction between Physician Gender and Comorbidity in offering Breast Reconstruction
5. Interaction between Physicians Gender and Age in the use of Chemotherapy
6. Interaction between Physicians Gender and Socioeconomic Status (SES) in use of Breast Conserving Surgery
7. Would Physicians Recommend the Breast Cancer Prevention Trial to Patient
8. Belief that Prevention of the Condition is Important for the Physician
9. American Association for Cancer Education Annual Meeting, October 31, 1997, Atlanta, GA.
10. Institutional Review Board Approval and Consent Form

NEW ENGLAND NERI RESEARCH INSTITUTES

Physician Decisions in Breast Cancer Care

Physicians Recruited as of 11/97

CALIFORNIA

Video Pair	PRE/POST	Spec.	Race	Year of Grad		Identification #		Int. Complete	
				Male	Female	Male	Female	Male	Female
9	33/29	GS	C	1971	1973	300393	303072	✓	✓
6	19/47	GS	C	1980	1979	313098	307474	✓	✓
13	49/15	GS	C	1982	1983	304355	312474	✓	✓
11	41/21	MO	C	1983	1982	311266	302196	✓	✓
5	17/45	GS	C	1975	1974	305287	312900	✓	✓
4	11/53	MO	C	1987	1987	303015	303377	✓	✓
3	9/55	MO	C	1980	1980	306913	312449	✓	✓
14	51/13	GS	C	1976		302072		✓	
2	3/61	GS	C	1978	1978	302851	312917	✓	✓
8	27/39	GS	C	1981	1981	311150	312757	✓	✓
10	35/31	GS	C	1978	1977	305255	305540	✓	✓
7	25/37	MO	C	1972	1970	307536	303800	✓	✓
13	49/15	MO	C	1973	1974	310384	308941	✓	✓
6	19/47	MO	C	1989	1984	307212	304637	✓	✓
15	57/7	MO	C	1971	1974	303540	312033	✓	✓
3	9/55	GS	C	1985	1985	312849	306116	✓	✓
1	1/63	GS	C	1982	1982	307505	301150	✓	✓
12	43/23	GS	C	1984	1984	307433	313049	✓	✓
11	41/21	GS	C	1971	1975	304176	313046	✓	✓
8	27/39	GS	C	1978	1980	313073	313041	✓	✓
1	1/63	GS	C	1978	1983	313074	313036	✓	✓
14	51/13	GS	C	1977	1981	313086	313044	✓	✓
4	11/53	GS	C	1982	1982	313075	304153	✓	✓
12	43/23	GS	C	1981	1983	313080	307529	✓	✓
10	35/31	GS/MO	C/AA	1980	1981	313091	301235	✓	RS
15	57/7	GS	C	1982	1985	313097	310141	✓	✓
9	33/29	GS	C	1981	1986	313096	311882	✓	✓
2	3/61	GS	C	1982	1989	309472	300148	✓	✓
16	59/5	GS	C	1988	1991	307207	313106*	RS	✓
5	17/45	GS	C		1991		313001		✓
7	25/37	GS	C	1956	1988	307856	313047	✓	✓
16	59/5	GS	AA/C	1984	1986	302634	305166	✓	✓

*previously listed as ID# 100838

GEORGIA

Video Pair	PRE/POST	Spec.	Race	Year of Grad		Identification #		Int. Complete	
				Male	Female	Male	Female	Male	Female
14	51/13	GS	C	1986	1988	100673	108342	✓	✓
11	41/21	GS	C	1974	1978	100856	108320	✓	✓
12	43/23	MO	C	1974	1978	102372	108327	✓	✓
1	1/63	GS	C	1983	1983	104397	108268	✓	✓
15	57/7	MO	C	1978	1979	100814	108250	✓	✓
1	1/63	MO	C	1976	1975	105135	108253	✓	✓
6	19/47	GS	C	1986	1984	101881	103542	✓	✓
16	59/5	GS	C	1988	1988	103833	103549	✓	✓
4	11/53	GS	AA	1985	1983	103620	106774	✓	✓
5	17/45	MO	C	1984	1985	104653	108326	✓	✓
9	33/29	GS	C	1982	1979	104270	103213	✓	✓
4	11/53	GS	C	1985	1985	103888	108266	✓	✓
7	25/37	MO	C	1982	1986	100979	108269	✓	✓
11	41/21	GS	AA	1977	1977	100345	108251	✓	✓
13	49/15	GS	AA	1984	1983	107101	108258	✓	✓
2	3/61	GS	C	1983	1983	106686	108262	✓	✓
3	9/55	MO	C	1983	1988	103251	102628	✓	✓
9	33/29	GS	AA	1981	1982	102037	108155	✓	✓
12	43/23	GS	C	1988	1987	106182	108181	✓	✓
5	17/45	GS	C	1988	1990	107125	108281	✓	✓
8	27/39	GS	C	1985	1984	102714	108279	✓	✓
15	57/7	MO	AA	1977	1974	102689	100110	✓	✓
6	19/47	MO	C	1982	1987	108315	108284	✓	✓
13	49/15	MO	C	1974	1969	108314	106192	✓	✓
7	25/37	MO	C	1977	1982	106254	108295	✓	✓
10	35/31	GS	C/AA	1954	1989	108223	104862	✓	✓
2	3/61	MO	C		1990		108294		✓
3	9/55	MO	C		1986		108254		✓
16	59/5	MO	C	1976	1982	102125	108329	✓	✓
8	27/39	GS	C	1974	1977	108204	108341	1/21	✓
14	51/13	MO	C		1990		306833		✓
10	35/31	GS	C	1956		108200		✓	

MICHIGAN

Video Pair	PRE/POST	Spec.	Race	Year of Grad		Identification #		Int. Complete	
				Male	Female	Male	Female	Male	Female
8	27/39	GS	C	1975	1978	207916	209623	✓	✓
2	3/61	MO	C	1977	1980	201657	209670	✓	RS
4	11/53	GS	C	1978	1981	200299	209594	✓	✓
13	49/15	GS	C	1977	1977	200070	203685	✓	✓
9	33/29	MO	C	1974	1969	209664	203521	✓	✓
15	57/7	GS	C	1981	1981	206931	207390	✓	✓
14	51/13	GS	C	1983	1984	206383	202815	✓	✓
13	49/15	MO	C	1979	1980	206292	209603	✓	✓
5	17/45	GS	C	1984	1986	206582	207509	✓	✓
3	9/55	MO	C	1976	1977	201538	206633	✓	✓
10	35/31	MO	C	1979	1982	209666	209629	✓	✓
10	35/31	GS	C	1982	1979	200895	209609	✓	✓
4	11/53	MO	C	1978	1983	206134	209606	✓	✓
2	3/61	GS	C	1965	1970	209311	209618	✓	✓
12	43/23	MO	C	1978	1981	209001	209573	✓	✓
5	17/45	MO	C	1964	1969	206130	203645	✓	✓
9	33/29	GS	C	1983	1984	209422	206017	✓	✓
3	9/55	GS	C	1978	1980	208835	203806	✓	✓
11	41/21	GS	C	1966	1970	209206	209401	✓	✓
14	51/13	MO	C	1957	1953	202666	209579	✓	✓
7	25/37	MO	C	1960	1965	204763	209582	✓	✓
6	19/47	GS	C	1989	1989	209226	206676	✓	✓
16	59/5	GS	C	1974	1975	209673	209622	✓	✓
15	57/7	GS	C	1976	1978	201287	209157	RS	✓
12	43/23	GS	C	1987	1988	202600	208279	✓	✓
16	59/5	GS	C	1984	1986	209326	209619	✓	✓
1	1/63	MO	C	1977	1972	206501	209007	✓	✓
1	1/63	GS	C	1987	1991	201650	209639	✓	✓
6	19/47	MO	C	1953	1950	201608	209584	✓	✓
11	41/21	MO	C	1985	1988	209685	205164	✓	✓
8	27/39	GS	C		1984		209593		✓
7	25/37	MO	C		1989		209610		✓

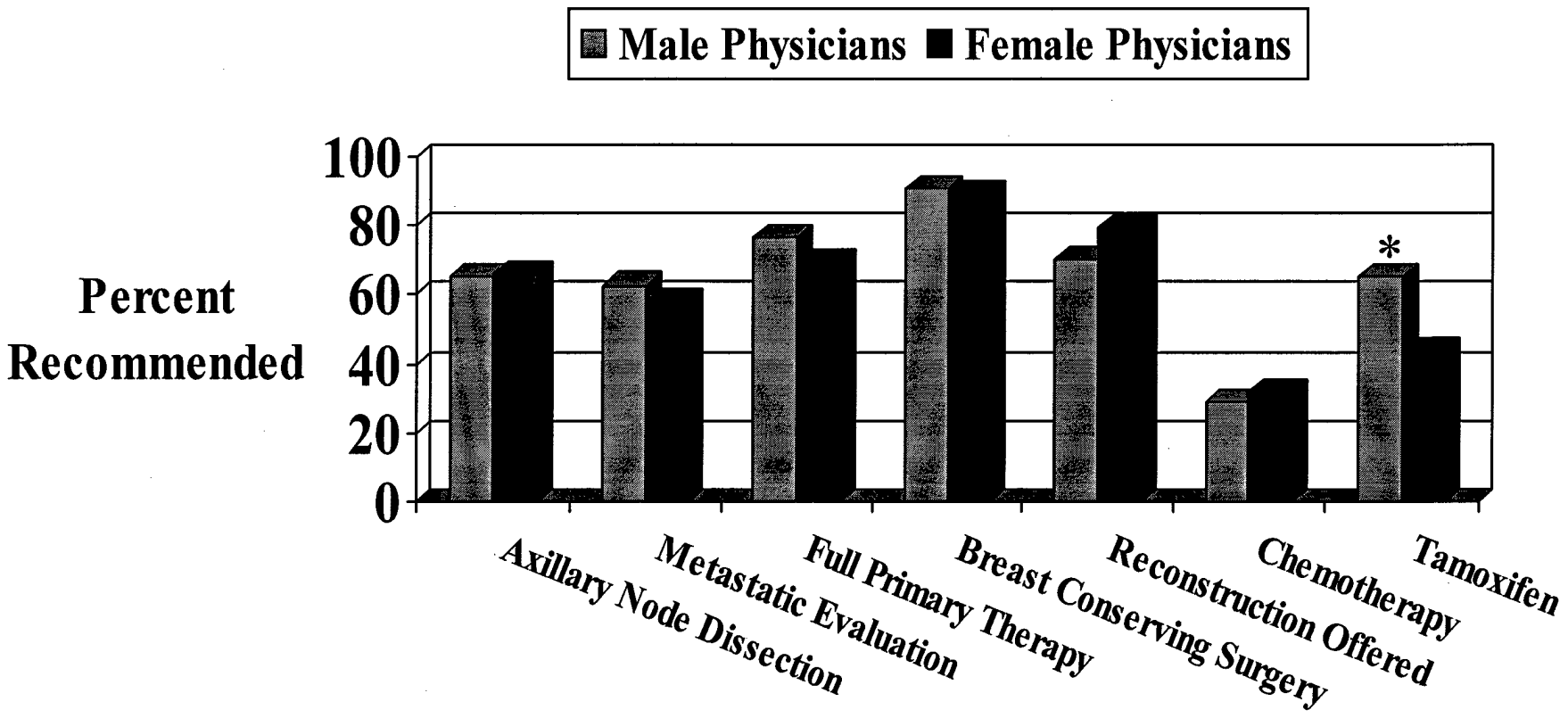
	Int. Complete		Scheduled		Pending RS		Total		
	Male	Female	Male	Female	Male	Female	M	F	All
CA	30	30	0	0	1	1	31	31	62
GA	28	31	1	0	0	0	29	31	60
MI	29	31	0	0	1	1	30	32	62
Total	87	92	1	0	2	2	90	94	**184**

Appendix 2
BIVARIATE ASSOCIATION OF PATIENT CHARACTERISTICS AND PHYSICIAN TREATMENT PREFERENCES

Outcomes	Patient Characteristics			Odds ratio
Axillary Node Dissection	Age 65	vs.	Age 80	**6.3 ****
	Caucasian	vs.	African-American	**0.4***
	High SES	vs.	Low SES	**0.7**
	Agile	vs.	Frail	**1.7**
	Healthy	vs.	Comorbidities	**0.7**
Metastatic Evaluation	Age 65	vs.	Age 80	**1.2**
	Caucasian	vs.	African-American	**0.7**
	High SES	vs.	Low SES	**0.8**
	Agile	vs.	Frail	**1.3**
	Healthy	vs.	Comorbidities	**0.9**
Breast Conserving Surgery	Age 65	vs.	Age 80	**0.6**
	Caucasian	vs.	African-American	**0.9**
	High SES	vs.	Low SES	**0.9**
	Agile	vs.	Frail	**1.1**
	Healthy	vs.	Comorbidities	**1.4**
Full Primary Therapy	Age 65	vs.	Age 80	**3.9****
	Caucasian	vs.	African-American	**0.6**
	High SES	vs.	Low SES	**0.6**
	Agile	vs.	Frail	**1.5**
	Healthy		vs. Comorbidities	**0.9**
Chemotherapy	Age 65	vs.	Age 80	**11.9****
	Caucasian	vs.	African-American	**0.6**
	High SES	vs.	Low SES	**1.5**
	Agile	vs.	Frail	**0.8**
	Healthy		vs. Comorbidities	**1.0**
Tamoxifen	Age 65	vs.	Age 80	**.60+**
	Caucasian	vs.	African-American	**1.5**
	High SES	vs.	Low SES	**0.9**
	Agile	vs.	Frail	**0.7**
	Healthy	vs.	Comorbidities	**1.0**
Reconstructive Surgery following mastectomy	Age 65	vs.	Age 80	**5.4****
	Caucasian	vs.	African-American	**0.8**
	High SES	vs.	Low SES	**0.7**
	Agile	vs.	Frail	**2.2+**
	Healthy	vs.	Comorbidities	**1.9***

+ = p <.10
*** = p < .05**
**** = p < .01**

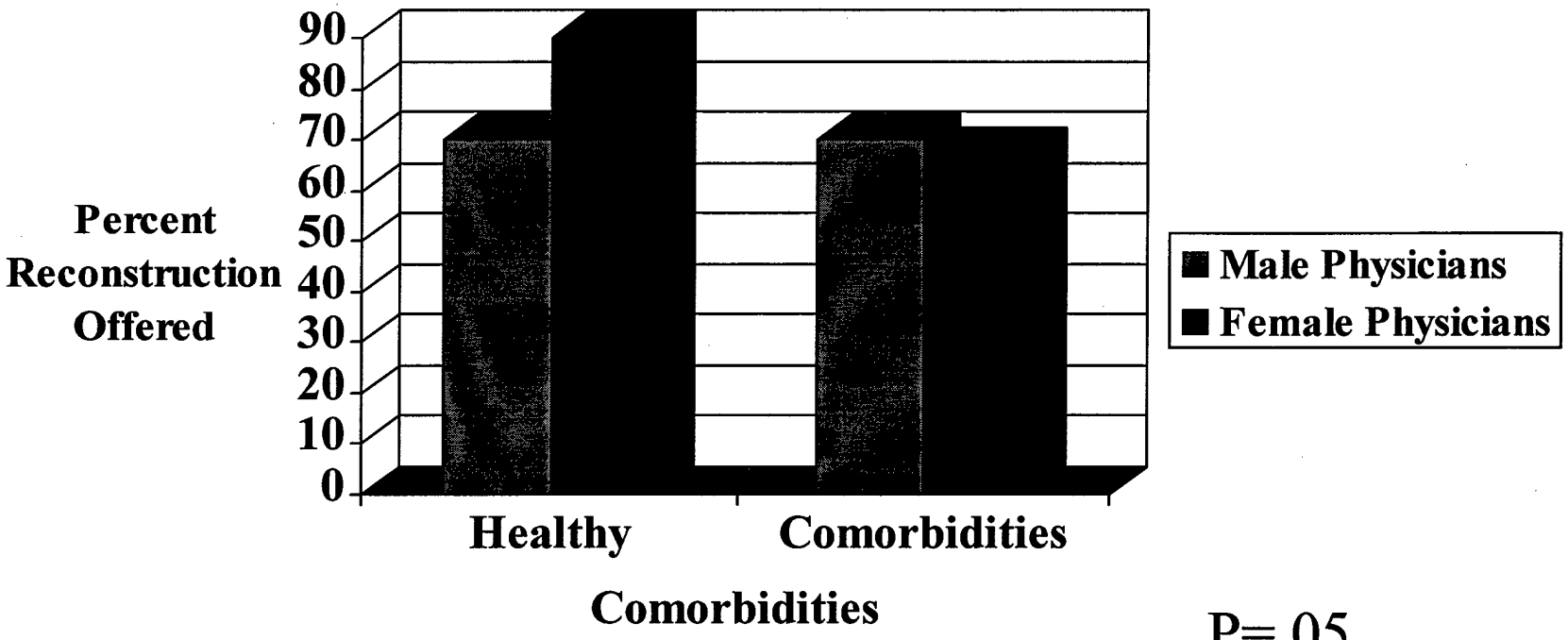
Gender Differences in Breast Cancer Treatment



* $p<0.01$

Appendix 4

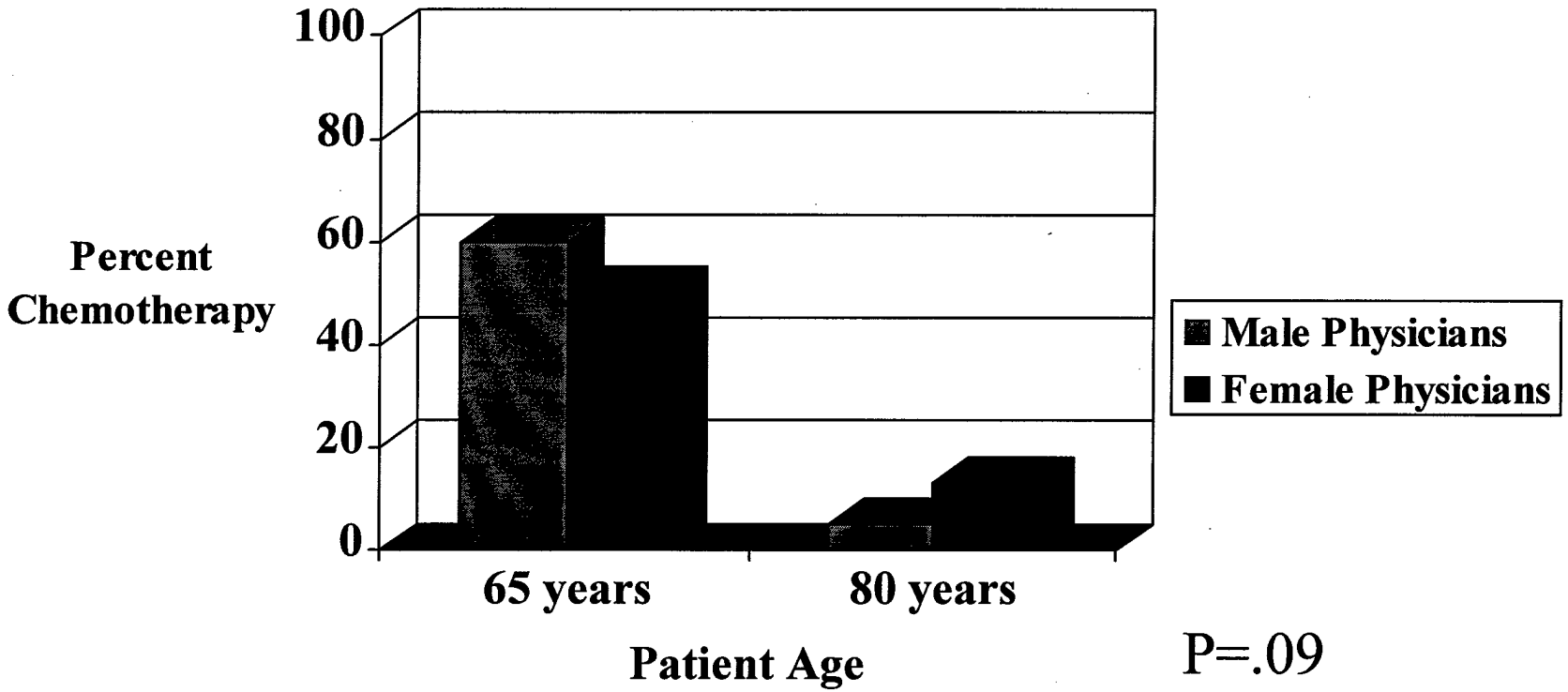
Interaction between Physician Gender and Comorbidity in offering Breast Reconstruction



P=.05

Appendix 5

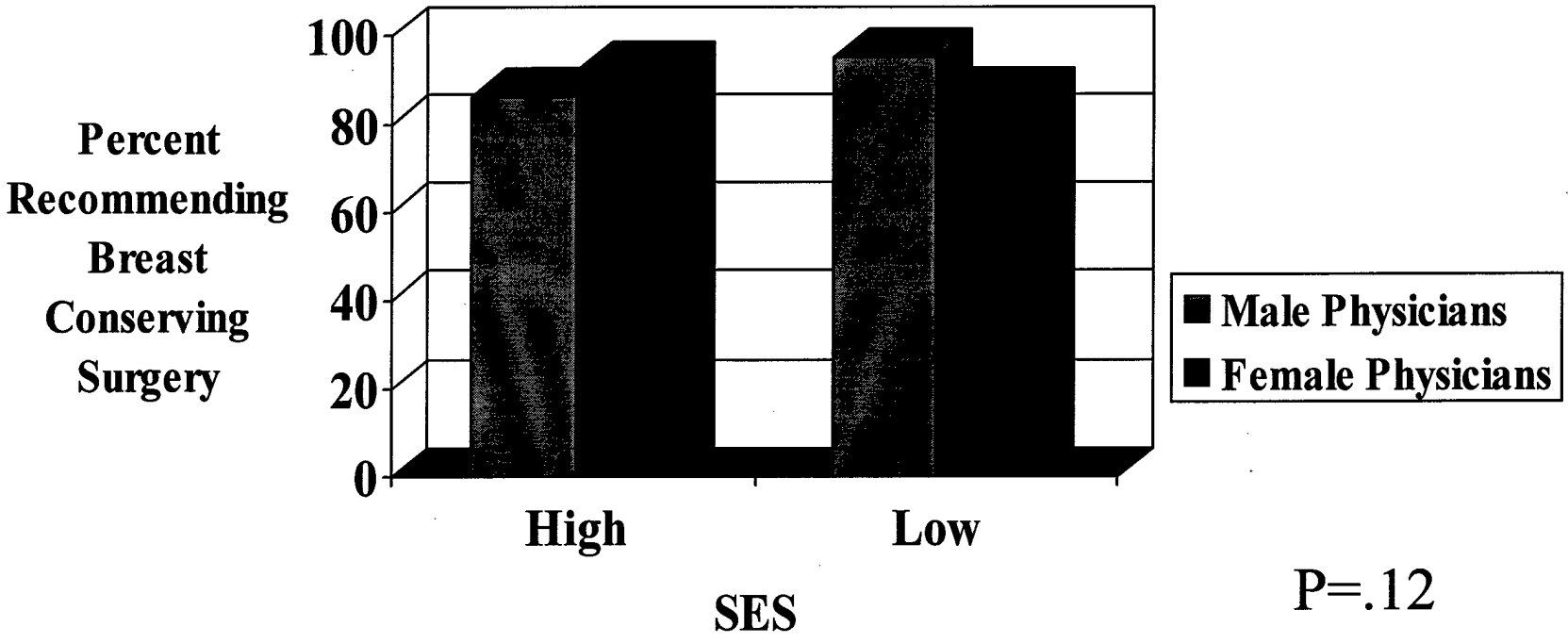
Interaction between Physician Gender and Age in the use of Chemotherapy



P=.09

Appendix 6

Interaction between Physician Gender and Socioeconomic Status (SES) in use of Breast Conserving Surgery



P=.12

Appendix 8

Would Physician Recommend the BCPT to Patient

Patient Characteristic		%	P
Age	65 years 80 years	28 12	.02
Race	White Black	22 12	NS
SES	Low High	22 21	NS
Comorbidity	Absent Present	25 17	NS
Mobility	Agile Fragile	21 22	NS

Physician Characteristic		%	P
Gender	Male Female	23 19	NS
Specialty	Oncology Surgery	39 11	.001

Appendix 9

Belief that Prevention of the Condition is Important for the Physician

Condition	**Osteoporosis**	**Breast Cancer**	**Coronary Artery Disease**
Patient Characteristic	**%**	**%**	**%**
Age			
65 years	64	85	63
80 years	42*	61**	47+
Mobility			
Agile		85	
Frail		65*	

American Association for Cancer Education

31st Annual Meeting
October 23-26, 1997

Renaissance Atlanta Hotel
Atlanta, Georgia

American Association for Cancer Education
31st Annual Meeting
October 23-26, 1997

1998 Meeting Program Committee
Chair: Anne Kessinger, MD - University of Nebraska
Richard Bakemeier, MD - University of Colorado
Robert Chamberlain, PhD - University of Texas, MD Anderson Cancer Center
June Eilers, PhD RN CS - University of Nebraska
Robert Gerlach, MPA - Cleveland Clinic Foundation
Rosaline Joseph, MD - Allegheny University Hospital / Medical College of Pennsylvania
Deborah McGuire, PhD RN FAAN - Nell Hodgson Woodruff School of Nursing
John Vetto, MD - Oregon Health Sciences University

Local Arrangements Committee
Co-chair: Selma Morris, MEd - Emory University–Grady Health System
Co-chair: Virginia Krawiec, MPA - American Cancer Society
Dee Baldwin, RN PhD - Georgia State University School of Nursing
Cindy Dorminy, MEd - Winship Cancer Center
Deborah McGuire, PhD RN FAAN - Nell Hodgson Woodruff School of Nursing
Kathy Miner, PhD MPH CHES - .Rollins School of Public Health
Joyce Sheats, RN MPH - Morehouse School of Medicine
L. Ann Voigt, CPNP MPH - Centers for Disease Control and Prevention
Anita Winkler - American Cancer Society

Program Objectives
After attending the meeting, participants should be able to:

1. discuss state-of-the-art research in:
   a.multidisciplinary and specialty cancer education
   b.public and patient cancer education
2. discuss outcomes of new and innovative approaches to:
   a.multidisciplinary and specialty cancer education
   b.public and patient cancer education
3. apply new and innovative techniques and materials for:
   a.multidisciplinary and specialty cancer education
   b.public and patient cancer education

Meeting participants will have the opportunity to review and evaluate new cancer education techniques and materials presented in poster sessions and podium presentations. The program agenda for the annual meeting includes two pre-conference workshops: "Assessment of Patient Quality of Life in Daily Clinical Practice" and "Evaluation of Cancer Education Efforts."

Who Should Attend
Physicians, nurses, health educators, social workers, and students in the health professions with all levels of skill and knowledge are appropriate meeting participants. A background in cancer education, either as a result of training or practical experience, is desirable, and required of members.

PROGRAM

Thursday, October 23, 1997

1:00 P.M. - 8:00 P.M. Registration

8:30 A.M. - 2:00 P.M. Executive Council Meeting

1:30 P.M. - 3:30 P.M. Workshop: **Assessment of Patient Quality of Life in Daily Clinical Practice.**
By the Palliative Care Section of AACE including D. Ross, P. Seligman and D. Weissman.

3:30 P.M. - 5:30 P.M. Workshop: **Evaluation Of Cancer Educational Efforts**
P. Mullan, Michigan State University

Both workshops will be interactive and provide practical tips for cancer educators that they can use at their home institutions.

6:00 P.M. - 8:00 P.M First Scientific Session, Poster Presentations and Reception
All posters selected for presentation will be exhibited during this session. Authors will be available to discuss their work.

POSTERS (grouped by topic)

Cancer Education And The Community

Cancer And Nutrition Support Using The World Wide Web
K. Flowers, K. Madden, L. Silferstein, M. Harrington, F. MacKintosh, S. St. Jeor. Reno, NV (abstract #1)

Innovative Ways Of Reaching The Underserved: Rural African American Church-Based Cancer Prevention Initiative (RACI)
J. Guidry, A. Larke, R. Moore. College Station, TX (abstract #2)

Recreating Harmony: Stories Of Native American Women Surviving Breast Cancer
L. Krebs. Denver, CO (abstract #3)

The Cancer Information Services: Reaching Hispanics With Cancer Information
J. Speyer and J. Kornfeld. Miami FL (abstract #4)

Cancer Education, Prevention, and Treatment: Creating Partnerships With African American Churches
B. Wheatley, D. Lee, J. Rosenberg. Oakland, CA (abstract #5)

Fight With Five: A Five-Week Education And Tracking Program To Increase Fruit And Vegetable Intake
G. Joyner, K. Shuleva, R. Koester, J. Hilyer. Birmingham, AL (abstract # 16)

Talking About Cancer
H. Mercer. London, England (abstract #17)

Increased Prostate Cancer Awareness And Screening Through A Novel Multicultural Sports-Based Program
B. Beech, C. Cunliffe, D. Beech. New Orleans, LA (abstract #18)

W.A.T.C.H. Mammogram Project
V. Castleberry and S. Berry. Tucker, GA (abstract #19)

Can Patient Education Lower The Anxiety Level In Patients Recalled After Screening Mammography
G. Cederbom, P. Kirsch, J. Wakeman. New Orleans, LA (abstract #20)

Using Partnerships To Educate Employers About Cancer Screening And Prevention Strategies
L. Hardy, K. Wiese, G. Johnson. Madison, WI (abstract #21)

Breast Cancer Early Detection Information Spread Through Valentine Message
M. Harris and the Breast Cancer Team of the Jefferson/Shelby Unit of the American Cancer Society. Birmingham, AL (abstract #22)

Prostate Cancer Screening In Colorado: Knowledge, Attitude, and Behaviors Of Health Care Providers and Consumers
P. Nelson-Marten, C. Chrvala K, L. Lamkin, K. Holtman, S. Lang. Denver, CO (abstract #23)

Kids Kicking Cancer: A Celebration For And About Children With Cancer
K. Romaguera, S. Romaguera, S. Sandberg, E. Duvic. New Orleans, LA (abstract #24)

Innovative Strategies To Communicate Breast Cancer Information Via The Internet
K. Wiese, R. Davis, P. Carbone, R. Friedman. Madison, WI (abstract #25)

The Education & Involvement Of Primary Care Physicians In A Cost-Efficient, Multidisciplinary Patient-Centered Breast Oncology Program
R. Kuske, G. Fuhrman, J. Bolton, J. Cole, C. Kardinal, G. Cederbom. New Orleans, LA (abstract #35)

Responding To Continuing Medical Education Needs On Breast Cancer Topics: Public/Private Partnerships
C. Moorman, L. Lianov, V. Lange. Lodi, CA (abstract #36)

A Multimedia Approach To Educating Primary Care Physicians About Pain Management
A. Thompson, M. Fulper-Smith, L. Deloney, S. Strode, D. Berry. Little Rock, AR (abstract #37)

Training Primary Care Managers As Breast Cancer Educators
D. Hunter, K. Ryan, G. Swain, B. Isman, C. Moorman, T. Reese, L. Randolph. Travis AFB, CA (abstract #38)

Teaching Cancer Care To Primary Care Physicians - Effectiveness Of Continuing Medical Education Programs - 1. Program Penetration
S. Rafla, R. Khafif, H. Ashamalla, J. Deysine, J. DiVenieri. Brooklyn, NY (abstract #39)

Cancer Education For The Health Sciences Students And House Staff

Evaluation Of The Short-Term Cancer Education Research Program
N. Burzynski and J. Yancey. Louisville, KY (abstract #40)

Hematology-Oncology For Sophomore Medical Students Using An Integrated Curriculum
J. Harper, S. Tarantolo, J. Landmark, P. Bierman, R. Kawahara, W. Chan, J. Newland. Omaha, NE (abstract #41)

Breast Cancer Education For Sophomore Medical Students: The Breast Cancer Symposium
J. Harper, E. Reed, D. Steele. Omaha, NE (abstract #42)

NCI Training Grant Generates Institutional Support For Short Research Experiences At LSUMC
B. LeGardeur and A. Lopez-S. New Orleans, LA (abstract #44)

9:15 A.M - 9:30 A.M. Welcome and Opening Remarks
Joseph F. O'Donnell, MD, President, AACE
Anne Kessinger, MD, Chairperson, Program Committee
Selma Morris, MEd, and Virginia Krawiec, MPA, Co-Chairpersons, Local Arrangements Committee

9:30 A.M. - 11:45 A.M. Second Scientific Session

PODIUM PRESENTATIONS - The name of the presenter appears in italics.

Cancer Education And The Community
Moderator: Virginia Krawiec, MPA, Atlanta, GA

a. Interventions to Reach the Community

9:30 A.M. Partnership To Increase Dissemination Of Cancer-Related Information To Librarians And Library Patrons
A. Mirand, S. Darrow, E. Powers. Buffalo, NY (abstract #53)

9:45 A.M. Health Education Via Public Transportation - The East-West Express
S. Morris and *B. Wheatley*. Atlanta, GA (abstract # 54)

10:00 A.M. Integrating Cancer Risk Assessment Into A Community Health Nursing Course
J. Phillips and *A. Belcher*. Baltimore, MD (abstract #55)

10:15 A.M. User Acceptance Of A Multimedia Program For The Prevention Of Malignant Melanoma
T. Moller, A. Isacsson, C. Hult, L. Lindholm. Lund, Sweden (abstract #56)

b. Reaching Minorities and the Underserved
Moderator: Selma J. Morris, MEd, Decatur, GA

10:30 A.M. A Model For Providing Cervical Cancer Education And Screening To Underserved Latino Women
M. Frank-Stromberg, M. Nelson, B. Chilton, L. Wassner. DeKalb, IL (abstract #57)

10:45 A.M. Screening To The Converted: An Educational Intervention In Selected African-American Churches Finds Parishioners Well-Screened
BD. Mann, L. Sherman, R. Johnson, C. Clayton, L. Nieman. Philadelphia, PA (abstract #58)

11:00 AM - 11:15 A.M. Break

2:00 P.M.	International Surgical Oncology Education: The American College of Surgeons/UICC Cancer Management Course Program *RE. Pollock*, I. Mortara, R. Clive, DJ. Winchester. American College of Surgeon and UICC (abstract #66)
2:15 P.M.	Teaching Cancer Care To Primary Care Physicians - Results Of A Multimedia Continuing Medical Education Program - 2. Effectiveness Of Videos *S. Rafla*, R. Khafif, H. Ashamalla, J. Deysines. Brooklyn, NY (abstract #67)
2:30 P.M. - 3:00 P.M.	Break and Posters
3:00 P.M. - 5:30 P.M.	Workshop: **The Case for Leaving Things Out** S. Stork, University of Nebraska Medical Center *This workshop will be interactive and provide practical tips for cancer educators that they can use at their home institutions.*
Evening	On your own

Saturday, October 25, 1997

7:00 A.M. - 3:30 P.M.	Registration
7:00 A.M. - 8:30 A.M.	Breakfast and Second Sections Meeting
8:45 A.M. - 11:00 A.M.	Fifth Scientific Session **Cancer Education For The Health Sciences Student** Moderator: Joseph F. O'Donnell, MD, Hanover, NH
8:45 A.M.	Teaching Oncology And Cancer Care TO GP Trainees In Sweden *L. Lindholm*, T. Moller, K. Wallin. Lund, Sweden (abstract # 92)
9:00 A.M.	Utility Of The Case Method Approach For The Integration Of Clinical And Basic Science In Surgical Education *D. Beech* and F. Domer. New Orleans, LA (abstract #68)
9:15 A.M.	The Need To Enhance Cancer-Related Education In Third-Year Medical Student Clerkships *P. Blair* and A. Sachdeva. Philadelphia, PA (abstract #69)

12:00
12:20
1:20
11:40

The Impact Of The Cancer Information services. Part 3: Effectiveness in Helping Patients And Family Members Cope With Cancer
S. Darrow, S. Zielinski, L. Fleisher, A. Marcus, J. Speyer. Buffalo, NY (abstract #78)

The Impact Of The Cancer Information Service, Part 4: Effectiveness In Promoting Prevention And Screening Behaviors
E. Maibach, S. Davis, N. Stevens, J. Matt. Washington, DC (abstract #79)

Patterns Of Information Seeking Among Callers To Cancer nformation Service (CIS)
C. Muha, S. Baum, J. Ward, J. TerMaat. Bethesda MD (abstract #80)

Noon - 2:00 P.M. — Luncheon and Business Meeting

2:00 P.M. - 3:00 P.M. — Presidential Address:Joseph F. O'Donnell, MD
"Making a Difference"

3:00 P.M. - 4:00 P.M. — Fifth Scientific Session (cont.)

Cancer Education For The Health Sciences Student (cont.)
Moderator: George J. Hill, MD, Newark, NJ

3:00 P.M. — The Impact Of An R-25 Cancer Education Grant On Medical School Consortium
B. Philips, J. Battles, J. Bowling, R. Bramson, M. Camp, C. Freytes, C. Kuratko, L. Laufman, B. Pence, J. Shores, A. Weinberg, T. Burt. Galveston, TX (abstract #81)

3:15 P.M. — The Effect Of Imagery On Medical Students' Perceptions Of The Cancer Experience From The Patient Perspective
P. Poldre, K. Taylor, D. Cowan. North York, Ontario, Canada (abstract #82)

3:30 P.M. — Practicing Physicians' Assessment Of The Impact Of Their Medical School Clinical Hospice Experience
P. Seligman, E. Massey, R. Fink, P. Nelson-Marten, Fr. P. VonLobkowitz. Denver, CO (abstract #83)

3:45 P.M. — Teaching Medical Students About Death And Dying: What Are The More Advanced Level Needs?
J. Vetto, N. Tobin, P. Bascom. Portland, OR (abstract #84)

4:00 P.M. - 4:30 P.M. — Sixth Scientific Session

9:00 A.M.	The Role Of The Advanced Practice Nurse In Educating House Staff In The Interdisciplinary Approach To Cancer Pain Management J. Griffie, *S. Muchka*, D. Weissman. Milwaukee, WI (abstract #91)
9:15 A.M.	An Experimental Approach to Medical Student Education about Managed Care *Mullan PB*, Tavano D (abstract #98)
9:30 A.M. - 10:30 A.M.	Eighth Scientific Session
	Clinical Cancer Trial Education For Patient And Provider Moderator: Anne Kessinger, MD, Omaha, NE
9:30 A.M.	Primary Care And Specialty Attitudes To Recruitment To Cancer Prevention Trials *K. Freund*, M. Mancuso, M. Prout. Boston, MA (abstract # 93)
9:45 A.M.	Enhancing Recruitment And Retention Of Minorities And Women To Clinical Trials Through Development Of A Statewide Plan *L. Krebs*, K. Osborne, G. Parsons, B. Foshes, P. Bunn. Denver, CO (abstract # 94)
10:00 A.M.	Evaluating The Quality And Effectiveness Of Patient Education In A Prospective Clinical Trial *R. Kuske*, K. Eckert, T. Miceli, A. Greaves, J. Cangelosi, B. Fineberg. New Orleans, LA (abstract #95)
10:15 A.M.	Can HMOs Be Educated Regarding Cancer Clinical Trials? *P. Raich*, R. Berris, A. Cohn, N. DiBella. Denver, CO (abstract#96)
10:30 A.M. - 10:45 A.M.	Break
10:45 A.M. - Noon	SPECIAL SESSION: **Educational and Funding Opportunities from the NCI, the ACS and the CDC-P**
Noon	Adjournment
Noon - 1:30 P.M.	Executive Council Luncheon

BOSTON UNIVERSITY SCHOOL OF MEDICINE

BOSTON UNIVERSITY MEDICAL CENTER HOSPITAL

Section of General Internal Medicine

720 Harrison Avenue, Suite 1108
Boston, Massachusetts
02118-2334
TEL: 617 638-8030
FAX: 617 638-8026

PHYSICIAN DECISIONS IN BREAST CANCER CARE

INFORMED CONSENT

Recent work on physician preference suggests that while this process is guided by medical criteria, other considerations also influence physicians. The purpose of this research study is to identify which factors are operative in physician's decisions and what implications arise as a result.

Physicians asked to participate in this study are randomly selected from mailing lists developed from the membership of professional societies and other sources. At this time, we would like to encourage your cooperation in this research endeavor.

Your involvement in this study is two-fold. First, we will present you with two videotaped simulated doctor-patient encounters, which we would like you to consider and render diagnostic and treatment recommendations. Each evaluation should take no more than 5-7 minutes to view. Second, a senior member of our interviewing staff will conduct a brief interview with you so that we might learn a little about you personally and professionally. This interview should take no more than 50 minutes to complete. The total of your time involvement will be approximately one hour. At any time you may refuse to answer questions or withdraw from the study.

We recognize that most clinicians are extremely busy. As such, we will make special efforts to carry out the data collection at times and in places which are convenient to each participating physician.

All precautionary measures will be taken to ensure subject confidentiality and privacy. All data (from interviews and simulation evaluations) will be safely secured in locked cabinets, and access to this data will be restricted to the Principal and Co-Principal investigators. All data will be published in aggregate form only. To ensure high quality data, the interview will be audiotaped for later review by project staff. The tapes will also be secured in locked cabinets, and they will be erased after they are reviewed.

IRB 12/5/96

Research Staff Initials_____ Physician Initials_____

Date_____ Date_____

There are no foreseeable risks or discomforts associated with your participation in this research. It is hoped that, as a result of this study, we will be able to understand more fully the factors taken into account by physicians in reaching diagnostic and therapeutic decisions. With the knowledge, we hope that future efforts can be directed at rationalizing the clinical decision-making process. You also will be paid $100 at the completion of the interview.

Representatives from the U.S. Army Medical Research, Development, Acquisition and Logistics Command are eligible to inspect the records of this research as a part of their responsibilities to protect human subjects in research.

If you have any questions regarding the research or your participation in it, either now or at any time in the future, please feel free to ask them. The research team, particularly Karen Freund, M.D., who may be reached at 617-638-8030, will be happy to answer any questions you may have. You may obtain further information about your rights as a research subject by calling the Coordinator of the Institutional Review Board for Human Research of Boston University Medical Center at 617-638-7266. If any problems arise as a result of your participation in this research, including research-related injuries, please call the principal investigator, Karen Freund, M.D., at 617-638-8030 immediately.

You are not obligated to participate in this research. If you choose not to participate, your present and/or future standing in the medical community will not be affected in any way. Also, if you participate, you may withdraw your consent and discontinue participation at any time without affecting you in any manner.

It is hoped that you will agree to participate in this research, by signing this informed consent form in the space provided. Your help is vital to the success of this study. If you have any questions concerning this study, please feel free to contact one of the following:

Karen M. Freund, M.D., M.P.H.
Principal Investigator
(617) 638-8030

John B. McKinlay, Ph.D.
Co-Principal Investigator
(617) 923-7747

IRB 12/5/96

Research Staff Initials_____ Physician Initials_____

Date_____ Date_____

SUBJECT'S STATEMENT OF CONSENT

You are authorized all medical care for injury or disease which is the proximate result of your participation in this research. Other than medical care that may be provided and the $100 professional fee, you will not receive any compensation for your participation in this research study; however, you understand that this is not a waiver or release of your legal rights.

I have read the above description of this research study, and I understand it. I have been informed of the risks and benefits involved, and all of my questions have been answered to my satisfaction. Furthermore, I have been assured that any future questions I may have will also be answered by a member of the research team. I understand that I will receive a copy of this form.

I understand that I am free to withdraw this consent and discontinue participation in this research study at any time without prejudice.

I voluntarily consent to my participation in the described research study.

Signature of Physician	Signature of Research Staff
Printed Name of Physician	Printed Name of Research Staff
Address	
	Date

VALID FOR USE THROUGH 12/5/97
PER IRB LLE 12/5/96

Research Staff Initials_____ Physician Initials_____

Date_____ Date_____